

Appln No. 10/773,186
Amdt. Dated August 30, 2006
Response to Office Action dated July 19, 2006

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REMARKS/ARGUMENTS

In response to the Examiner's further Office Action of July 19, 2006 the Applicant respectfully submits the accompanying Amendment to the claims and the below Remarks.

Regarding Amendment

It is noted that the Examiner states that claims 1-54 are pending in the present application in the Office Action Summary. However, in Applicant's Reply of 24 April 2006 was accompanied by an Amendment in which claims 4, 9, 22, 23, 28, 41 and 45 were cancelled. Thus, claims 1-3, 5-8, 10-21, 24-27, 29-40, 42-44 and 46-54 are pending in the present application.

In the Amendment:

independent claims 1, 19 and 38 are amended to replace "the, or each, bubble nucleation section" with --each bubble nucleation section-- and to incorporate the subject matter of pending claims 7 and 26 that the heater element is in the form of a cantilever beam and to clarify that the cantilever beam has a supported end and a free end. Support for this amendment can be found, for example, at page 12, line 5-page 13, line 12 and page 20, lines 9-12 of the present specification;

dependent claims 2, 7, 20, 26 and 39 are cancelled accordingly; and

dependent claims 3, 5, 6, 8, 10-18, 21, 24 25, 27, 29-37, 40, 42-44 and 46-54 are unchanged.

It is respectfully submitted that the above amendments do not add new matter to the present application.

Regarding Claim Objections

It is respectfully submitted that the above-discussed amendment to independent claims 1, 19 and 38 replace "the, or each, bubble nucleation section" with --each bubble nucleation section--, provides the correction required by the Examiner.

Regarding 35 USC 103(a) Rejections

It is respectfully submitted that the subject matter of above-discussed amended independent claims 1, 19 and 38, and claims 3, 5, 6, 8, 10-18, 21, 24 25, 27, 29-37, 40, 42-44 and 46-54 dependent therefrom, is not taught or suggested by any one or more of previously cited Andrews, Tachihara, Silverbrook and Anagnostopoulos in view of newly cited Campbell and/or De Moor et al., for at least the following reasons.

In the present invention, as recited in amended independent claims 1, 19 and 38, forming the heater element 10 as a cantilever beam having a supported end and a free end minimizes the amount of direct contact between the heater element and the nozzle, which, coupled with the bubble nucleation configuration of the heater elements, provides a very efficient printhead (see page 12, line 5-page 13, line 12 and page 20, lines 9-12 of the present specification).

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On the other hand, none of Andrews, Tachihara, Silverbrook, Anagnostopoulos, Campbell and De Moor teach or suggest such an arrangement. In particular, the Examiner has rejected pending dependent claims 7 and 26, which recite this arrangement, over Andrews and Anagnostopoulos citing the elements 712-716 of Figure 8 of Andrews and the TiN heater of Figure 5 of Anagnostopoulos.

However, the elements 712-716 illustrated in Figure 8 of Andrews clearly do not have a supported end and a free end, and as such do not constitute a cantilever beam, and it is clear that the view of the TiN heater illustrated in Figure 5 of Anagnostopoulos (as well as the other similar figures) is merely a cross-sectional view of the looped TiN heater which are illustrated in plan view in Figs. 1A-1F (see col. 5, line 41-col. 6, line 9 of Anagnostopoulos). Thus, like Tachihara, Silverbrook, Campbell and De Moor, the disclosures of Andrews and Anagnostopoulos do not teach or suggest the arrangement of amended independent claims 1, 19 and 38.

It is respectfully submitted that all of the Examiner's rejections have been traversed. Accordingly, it is submitted that the present application is in condition for allowance and reconsideration of the present application is respectfully requested.

Very respectfully,

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